ABSTRACT

An embodiment of a halftoning method reduces the grainy appearance resulting from overlap of cyan and magenta colorants using a single threshold matrix for both the cyan and the magenta color planes. The cyan color value and the magenta color value for a pixel are summed. If the sum is greater than the maximum possible color value by at least the corresponding matrix threshold value, both cyan and magenta colorants are placed on the pixel. If the sum is not greater than the maximum possible color value by at least the corresponding matrix threshold value, then the smallest of the cyan color value and the magenta color value is compared to the corresponding matrix threshold value. If this smallest color value is greater than the corresponding matrix threshold value, the corresponding colorant is placed on the pixel. Otherwise, the other colorant is placed on the pixel. If the sum is less the maximum possible color value, then the sum is compared to the corresponding matrix threshold value. If the sum is greater than the corresponding matrix threshold value, colorant will be placed on the pixel. The smallest of the cyan color value and the magenta color value is compared to the corresponding matrix threshold value. If this smallest color value is greater than the corresponding matrix threshold value, the corresponding colorant is placed on the pixel. Otherwise, the other colorant is placed on the pixel.